

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1.-13. (Cancelled)

Claim 14. (Currently Amended) ~~The method of claim 1, A method for thermomechanical treatment of a round steel rod, said method comprising:~~

~~deforming said steel rod in a single deforming step, coordinated with heat treatment of said steel rod, wherein said single deforming step, coordinated with heat treatment, includes,~~

~~heating said steel rod to a heating temperature that is above a recrystallization temperature;~~

~~equalizing the heating temperature of the steel rod over its length; causing said steel rod to be deformed by a single step of skew rolling while it remains substantially straight, such that a predetermined twisting of the material occurs in a marginal area of said rod and a desired deformation gradient is achieved over a cross section of the rod, whereby, after a critical~~

degree of deformation is exceeded, dynamic recrystallization processes take place with greatest intensity in the marginal area;

reheating the rod to a temperature above Ac3; and

hardening and tempering the rod;

wherein the structural distribution over the cross section of the finish-worked round rod leads to a property profile, which is adequate for the tension profile over the cross section in the case of flexural and/or torsional stress.

Claim 15. (Cancelled)

Claim 16. (Currently Amended) The method of claim [[1,]] 26, wherein:

said skew rolling is performed in a skew rolling stand;

rolls of the skew rolling stand are adjusted in one of an axial and a radial direction during the deformation operation; and

round rods are produced with a diameter which varies over their length.

Claim 17. (Currently Amended) The method of claim [[1,]] 26, wherein during reheating above Ac₃ following skew rolling, a temperature difference over the rod length is limited to a maximum of 5°K.

Claim 18.-23. (Cancelled)

Claim 24. (Currently Amended) The method of claim [[21,]] 26, wherein the winding and/or a bending is performed in the same heat after recrystallization and before the hardening and tempering.

Claim 25. (Cancelled)

Claim 26. (Currently Amended) A method for producing hot forming a steel coil spring or stabilizer, said method comprising:

using a round steel rod as a starting material;

deforming said steel rod in a single deforming step, coordinated with heat treatment of said steel rod, wherein the single step of deforming, coordinated with heat treatment includes,

heating said steel rod to a heating temperature that is above a recrystallization temperature;

equalizing the heating temperature of the steel rod over its rod length;

causing said steel rod to be deformed by a single skew rolling step while it remains substantially straight, such that a predetermined twisting of the material occurs in a marginal area of said steel rod and a desired deformation gradient is achieved over a cross section of the rod, whereby after a critical degree of deformation is exceeded, dynamic recrystallization processes take place with greatest intensity in the marginal area;

reheating the rod to a temperature above Ac3;

hot winding the rod to form a coil spring or bending [[them]] it into a stabilizer; and

hardening and tempering the wound or bent rods.

Claim 27. (Currently Amended) The method according to claim 26, wherein a direction of the twisting of the structure in the marginal region of the round rod corresponds to [[the]] a main direction of tension of the coil spring or the stabilizer stressed by torsion.

Claim 28. (Previously Presented) The method of claim 26, wherein a direction of twisting of the structure in the marginal region of the rod is oriented with respect to the axis of the round rod, within a range of 35° - 65°.

Claim 29. (Cancelled)

Claim 30. (Previously Presented) The method of claim 26, wherein the skew rolling of the rod is performed with an average degree of stretching λ of at least 1.3.

Claim 31. (Currently Amended) The method of claim 26, wherein [[the]] a maximum deformation occurs in the marginal area of the rods that lies between 0.65 and 1.0 times the diameter of the rod and is at least 0.3.

Claim 32. (Previously Presented) The method of claim 26, wherein, in said heating step, the material is heated at a rate between 100° - 400°K/s.

Claim 33. (Previously Presented) The method of claim 26, wherein, in said heating step, the heating temperature is between 700° and 1100°C.

Claim 34. (Previously Presented) The method of claim 26, wherein, in said heating step, the heating is performed inductively.

Claim 35. (Previously Presented) The method of claim 26, wherein the equalization of the heating temperature of the rod takes place for at least 10 seconds.

Claim 36. (Previously Presented) The method of claim 26, wherein a temperature difference over the length of the rod does not exceed 5°K.

Claim 37. (Previously Presented) The method of claim 40, where the heating temperature of the rod is kept constant virtually up to its entry between said rolls of said skew rolling stand.

Claim 38. (Previously Presented) The method of claim 26, wherein, during the skew rolling, a maximum local temperature increase of 50°K is not exceeded.

Claim 39. (Currently Amended) The method of claim 26, wherein the skew rolling is performed in a temperature range of 700° - 1150°C. ~~1100°C.~~

Claim 40. (Previously Presented) The method of claim 26, wherein:
the skew rolling is performed in a skew rolling stand;
rolls of the skew rolling stand are adjusted in one of an axial direction and a radial direction during the transformation operation; and
the round rods are produced with a diameter, which varies over their length.

Claim 41. (Previously Presented) The method of claim 26, wherein, during the reheating step, a temperature difference over the rod length is limited to a maximum of 5°K.

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Claim 42. (Previously Presented) The method of claim 26, wherein the starting material of the rods is spring steel.

Claim 43. (Previously Presented) The method of claim 26, wherein the starting material of the rods is silicon-chromium steel.

Claim 44. (Previously Presented) The method of claim 26, wherein the starting material of the rods is microalloyed steel.